

Date: Wednesday, 02/04/2008 3:39:31 PM
 User: Julie Lecocq

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: CROSSTUBE EXTRUSION (OH-58)
Job Number	: 38339		
Estimate Number	: 10029		
P.O. Number	:	Part Number	: D6007106
This Issue	: 02/04/2008 S.O. No. :	Drawing Number	: D6007 REV A
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: / / Type : RMA	Drawing Revision	: A
Previous Run	: 28799	Material	:
Written By	:	Due Date	: 26/09/2008 Qty: 45 Um: Each
Checked & Approved By	: <u>JD 08.4.03</u>		
Comment	: Est Rev:B 00.12.06 Added: Issue P/O EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	PG	PURCHASING
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Comment: PURCHASING

Issue P/O 606308/04/04

a) Extrude as per Dwg D6007

b) Material: 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube

c) Minimum ultimate tensile strength = 77 ksi

d) Minimum tensile yield strenght=66 ksi

e) Material certification required

(45)

2.0	D6007106P	Crosstube
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 45.0000 Each(s)
 Crosstube

3.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage
 Ensure material certification is attached

M109276
M109279

08/09/16

(x50)

4.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

Ensure Material certification comply to Dwg D6007

08/09/17

counter

(x50)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 02/04/2008 3:39:32 PM

User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: CROSSTUBE EXTRUSION (OH-58)

Job Number: 38339

Part Number: D6007106

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

u/w S 8/2/17

6.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *X tube cell*

8T 08-09-17 (250)

7.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/09/18 HJ

Job Completion



MF 08-09-18

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

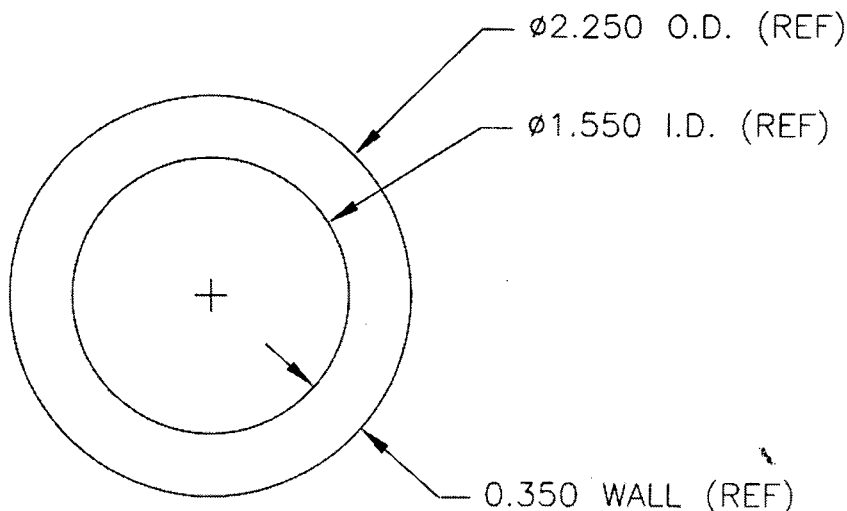
NOTE: Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D6007	REV. A SHEET 1 OF 1
DATE 00.11.17		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	00.11.17	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED
00.11.24 *[Signature]*



NOTES

- 1) D6007-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES

EG. 106" LONG TUBE: D6007-106

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 38339

- 2) MATERIAL: 2.250 OD x 0.350 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.006 MEAN (± 0.012 INCLUDING OVALITY)
WALL: ± 0.015 MEAN (± 0.035 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.125/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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Packinglist ALUnna AG

Customer PO	PO. 00006063
ALUnna ref. no.	29104/4
Date:	08.14.08

Boxmarking:

Dart Aerospace PO. 00006063
Made in Germany
Dest, Hawkesbury Ont. Canada

We hereby declare that the wooden packing material are totally free from bark and apparently

free from live plant pests

free from live plant pests										Boxdimension		
Item no.	Box no.	OD (inch)	ID (inch)	Wall (inch)	Net Weight (lbs)	Tare lbs	Gross Weight	Pieces	lengths (ft)	Lengths (inch)	Width (inch)	height (inch)
4	1	2,250	0,500	0,350	1098	51	1149	50	9	108,268"	. 17,717	20,079
					1098	51	1149	50		,631 m³		

Abnahmeprüfzeugnis 3.1 - EN 10204:2004

Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1- EN 10204:2004

Kunde: Dart Aerospace Ltd.
Client:

1270 Aberdeen Street
 K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: 1218/08

Cert No. / No. du certificat:

Bestellnummer: PO00006063

Order No. / No. de commande

Auftrag: 29104/4

Our Reference/Notre Reference:

Produkt: Rohre nahtlos gepresst

Product / Produit: Tubes seamless extruded

Spezifikation: AMS - QQ - A - 200/11E; Spezifikation Dart Aerospace D6007

Specification:

Werkstoff: 7075

Alloy/Alliage:

Zustand: T 6511

Temper/État

Abmessung: 2,250 INCH x 1,550 INCH x 0,350 INCH x 106,000 INCH

Size / Dimension: D6007-106 2,250 x 0,350 x 106

Kennzeichnung: ALUnna - Cert No. 1218/08 - 7075 - T 6511 - Cast No. 1233 - AMS QQA 200/11 - 2.250" OD X 0.350" Wall - Heat

Marking/Marquage: Lot no. 1840 - ALUnna Order Conf. No. 29104/4-1 PO. 00006063

Lieferung

pcs.

lbs

Country of Manufacture: Germany

Delivered Material / Matériel délivré:

50

1098

1. Chemische Analyse

Chemical Analysis / analyse chimique

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
Charge/ min.			1,2		2,1	0,18	5,1						
Cast No. max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
1233/08	0,121	0,194	1,395	0,055	2,457	0,196	5,775	0,040	0,002	0,0179	0,0001	0,0011	0,0002

Hydrogen content: 0,10

ccm/100 g Al Elements without indication < 0,01 %

country of melt manufacturer: Germany

2. Mechanische Eigenschaften

Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat Lot No.
min.	77,0	66,0				
max.						
1	87,580	81,200	11,0	S 08609/12		1840 - 50 pcs.
2	86,855	80,330	12,0			

RMS: outside 25 - max. 9,7 µ"

Ergebnis der Prüfungen:

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results:

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats:

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

Kramper



Certified acc. DIN EN ISO 9001:2000 and DIN EN 9100:2003
 valid until 2010-11-11

Cert. - Reg. No.: 001959 QM; 001959 ASH



ALUnna

Abnahmebeauftragter

15.08.2008

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany